Seat No.:_____ Enrollment No.:_____

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
B. Sc., Winter 2017-18 Examination

Semester: 5 **Date: 28/12/2017**
Subject Code: 11101301 **Time: 02:00 pm to 04:30 pm**
Subject Name: Dairy Microbiology **Total marks: 60**

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q. 1 (A)	**Brief note (each of 04 marks)**	**08**
	(a) Define Clean milk and Explain types of milk.	
	(b) Micro flora of Milk	
Q. 1 (B)	**Answer the following questions. (Any two)**	
	(a) Short note	**04**
	1. Brucella ring test	
	2. MBRT	
	(b) Explain the Total bacterial count and somatic cell count of milk	**04**
	(c) Composition of milk and importance of SNF.	**04**
Q.2 (A)	**Answer the following questions.**	
	(a) Full form of MBRT, LTH, HTST and UHT	**04**
	(b) Phosphatase test	**04**
Q.2 (B)	**Answer the following questions. (Any two)**	
	(a) Answer the Multiple choice question	**03**
	1. The "flash method" or "high temperature short time" method exposes fluids to (a) heat below 100°C. (b) 62.3°C for 30 minutes. (c) 72°C for 15 seconds. (d) 134°C for 1 second.	
	2. Pasteurization is used to sterilize milk (a) True (b) False	
	3. Freezing at below -20°C will kill most pathogenic food bacteria and inactivate toxins. (a) True (b) False	
	(b) Explain spoilage of milk	**03**
	(c) Short note on method of pasteurization of milk	**03**
Q.3 (A)	**Brief note (each of 04 marks)**	**08**
	(a) Explain the Metabolism of citrate.	
	(b) Naturally occurring preservation system of milk.	
Q.3 (B)	**Answer the following questions. (Any two)**	
	(a) Explain briefly	
	1. Explain LP system	**04**
	2. Explain immunoglobulin and lysozyme as a natural milk preservative.	
	(b) How detection of pesticide and aflatoxin are carried out in milk?	**04**
	(c) Role of Bacteriocin and other compound as a preservative.	**04**
Q.4 (A)	**Answer the following questions.**	
	(a) Answer the following objective questions.	**04**
	1. full form of BOD and COD	
	2. Define starter culture and give example used in preparation of butter milk.	
	(b) Explain types of starter culture.	**04**
Q.4 (B)	**Answer the following questions (Any two)**	
	(a) Explain preparation of yoghurt and cultured butter milk	**03**
	(b) Different approaches for use of dairy effluent.	**03**
	(c) What is bioactive compounds? Explain their role in dairy products.	**03**